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Competition and Artistic Gymnastics: How to Make the Most of This Experience

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Sport participation has been growing worldwide and its potential benefits are well known. However, youth competitive sport is still a matter of debate. Competition is inherent to sport, but discussions abound when young athletes are involved. This is particularly the case in sports where early specialization and high training loads are the norm, such as artistic gymnastics. In the present study we interviewed 46 coaches, who are coaching developing elite gymnasts in Brazil, and attempted to understand their attitudes toward competition. Coaches expressed concern about the motivation, the ability of athletes to set their own goals, and providing extrinsic rewards. In contrast, some coaches saw extrinsic rewards as an effective strategy to keep their athletes committed. The study highlighted the need for both concern and understanding by coaches about individual differences due to maturation and growth.

Keyword: sporting competition, youth sport, artistic gymnastics, participation guidelines

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1. Introduction

For the last few decades, sport has been growing in our society (De Knop et al., 1996) and worldwide a great number of children and youth are involved in sport in a wide range of practise levels (McCullick et al., 2005). The media, the ongoing talent identification and development programs, and the work of national federations and state-run centre of sport development may be impacting on this increasing interest in sport (Smoll & Smith, 2002). As competitions are inherent to sport (De Rose Jr., 2002a), the number of competitive events has grown significantly. Even though there are many claims about the potential benefits of sport participation for children and youth (Hedstrom & Gould, 2004; Weiss & Stuntz, 2004; Malina & Cumming, 2003; Weinberg & Gould, 2001) it is still unclear if it really has been impacting positively on them in either the short or long term. Sport is complex as it is the interplay of competition and a range of physical, emotional and psychological factors, which all have influence on the development of athletes. The more sport becomes organized and structured with increased demands and pressures, the more athletes may be harmed or suffer from burnout (Hedstrom & Gould, 2004). Parents' and coaches' roles are paramount and the authors cite the quality of adult leadership as a key factor in maximizing the positive aspects of sport participation. Competitive sport can be appropriate and beneficial for children if attention is paid to a set of principles that ensure an athlete centered approach is adopted. Through the analysis of the interviews with 46 Brazilian coaches of aspiring gymnasts, this study aims to clarify their attitudes toward competition.

2. Review

Training, competing, winning, losing, and receiving rewards are part of the coaching experience. Sport may play a leading role in the growth and developmental process of youth, as it is associated with competency, character building, discipline, self-control, persistence, respect, and others (Hedstrom & Gould, 2004; Weiss & Stuntz, 2004; Bompa, 2000). Drewe (1998) also cites extrinsic and intrinsic values to competition, which may

be positive or negative. However, there is a consensus that the training and competition needs of youth and adults are different. Therefore, sport needs adjustments to better suit youth characteristics and interests, particularly regarding the objectives and expected outcomes (Relvas, 2005; Marques, 2004; Hedstrom & Gould, 2004).

To benefit from competition one should be prepared, taught, and ready to compete. Passer & Wilson (2002) point out the possible indicators of children's readiness for involvement in competitive situations, e.g. motivation to compete, maturity to understand evaluation and social comparisons, and ability to self-evaluate and process information. Unfortunately, nowadays these indicators of readiness tend to be neglected in the pursuit of immediate outcomes. However, it is erroneous to think that youth sport would be pedagogically appropriate if we could eliminate competitions (Marques, 2004). It is claimed that competitive sport leads to individualism, undervalues effort, and that it over-emphasizes result-oriented strategies. Despite such negative views, winning and losing are noteworthy experiences and competitions may develop other qualities as well as ethics and moral values. Even the experience of defeat may motivate athletes to pursue better performances in the future (Lopes & Nunomura, 2007).

During childhood and adolescence competition is abundant, but often there is a mismatch between the objectives of the competition and the needs and interests of the participants (De Rose Jr., 2002b). When results are the main goal of training and competition, particularly for the youth, one will get fewer benefits. Even though criticisms remain, would children, youth, and their parents still be committed to sport without competition?

2.1. Stress and youth sport competition

Another criticism directed at youth sport is its potential as a source of stress (De Rose Jr., 2002a; Weinberg & Gould, 2001; Bompa, 2000) as competition raises the expectation of both the athlete and those in the athlete's circle. In youth competition, the conjunction of external pressures with those self-imposed by the athlete may yield a 'tipping point' that leads to a de-motivated athlete who suffers burn-out and drops out altogether. While stress is a normal part of life, irrespective of age, with youth, however, there is a duty of care to ensure that stresses encountered are manageable (Hedstrom & Gould, 2004; De Rose Jr., 2002a; Butcher & Linder, 2002). Silva et al. (2005) associated the high volume of competition in youth sport to the potential source of stress. Weinberg & Gould (2001) also have linked children dropouts to stress. On the other hand, Marques (2004) argues over the Portuguese gymnasts' motivation as they compete only in six events annually, against 45 in soccer. There is no consensus about how much children and youth should compete. The readiness of the athlete, their age, and the type of sport are factors that will bear on the volume of competition that is appropriate. Rather than a prescriptive approach, we argue that a set of guiding principles is more likely to be adopted by sport administrators and other responsible for the delivery of youth sport.

2.2. Sport competition and motivation

Studies have shown that "to compete" is among the main reasons for children participating in sport, but "to win" is not highly ranked as one would expect (Lopes & Nunomura, 2007; Relvas, 2005; Hedstrom & Gould, 2004; Gano-Overway & Ewing, 2004; Weinberg & Gould, 2001). Particularly for children, competition should be seen as part of a broader sport experience and not the raison d'être for the training. It is suggested that the progress of young athletes should be judged against personal performance standards and not those of others. The learning experience is important with non-performance outcomes, such as socializing and team-work, and the need for recognition (Zakharov & Gomes, 2003; Bompa, 2000; Weineck, 1999). At later stages of sport, competition may be the main objective and parameter of comparison with others. But Samulski (2002) draws attention to other ways of achieving self-fulfillment in sport; for example, the mastery of movement.

2.3. Sport competition and early specialization

Some scholars point to the value of participation across a range of sports. However, the overemphasis on winning in youth sport may impact negatively on the growth and development process (Zakharov & Gomes, 2003; Bompa, 2000; Balyi, 2000; Weineck, 1999). Others (Marques, 2004; Bompa, 2000; Wiersma, 2000) argue that the emphasis on winning may give rise to young athletes skipping stages of development and missing out on some broader sport experience, known

as early specialization. In Brazil, children can officially compete at age seven in artistic gymnastics (AG) and at age five in futsal. In the USA, children are competing at age three in AG and swimming, and at age five in T&F, soccer, and baseball (Bompa, 2000). And pressure and stress may already be impacting here. Given the current technical and judging requirements in AG, early specialization may be necessary. However, it has implications for the welfare of children and all involved in sport should monitor closely and regularly the impact of training and competition on gymnasts.

2.4. Youth sport competition organization

There is general agreement that competition should be planned to meet the specific requirements of youth and not follow adult models, irrespective of its context (formal or informal). Similarly, children should be gradually introduced to competitive settings (Tsukamoto, 2004; Bompa, 2000; Douge, 1999). Suggestions are provided on how to adjust competition to meet the requirements of children and youth with variations to the adult models (Siedentop et al., 2004; Bompa, 2000). However, the literature is still polarized when it comes to children and competition. At the 'anti-end' of the spectrum, competition is viewed as abusive. A more sanguine view is that it depends on "how" competition are organized and "what" is pursued in the name of competition. As youth competitions are organized by adults, it may reflect the organizer's interests rather than the wishes of the participants.

3. Procedures

3.1. Participants

Forty six AG Brazilian coaches from 29 different institutions in four States were interviewed from winter 2004 to autumn 2005. Twelve coaches are coaching male gymnasts and 34 female gymnasts. The average coaching experience of the coaches of female gymnasts was 12.2±5.7 years and 14.5±7.5 years for the coaches of male gymnasts. The gymnasts' average age is 11.2±2.3 years. The female gymnasts spent an average of 12 to 24 hours of training per week, and male gymnasts from 11 to 28 hours of training per week. The selection criteria for coaches were based on their regular participation in State and National official events and those who are coaching gymnasts at pre-elite level. Coaches and their supervisors were contacted with a formal letter prior to the interviews. The purposes and procedures of the study were detailed. All interviews were conducted in the workplace according to the coaches' requests and in an office out of the view of others were chosen for privacy.

3.2. Research design

A qualitative approach and deductive analysis were adopted for this study. A script was used to guide the interviews, and subjects were videotaped and their narratives were transcribed verbatim. The interviews lasted from 42 to 88 minutes each and coach was asked to talk about the role of competition for gymnasts according to the script.

3.3. Research measure

Content analysis was used for data treatment, and it is known to suit well the needs of studies related to motivation, attitudes, values, beliefs, and trends (Bardin, 2001). The first part of the method consists of the treatment of gross data (reading), and the codification process where data are divided into meaningful segments of information (data reduction into units of meanings). A detailed examination of the data is done to identify topics which best describe particular segments of text. Secondly, the categorization of the units is done according to their context and common features which characterize the text segments and the relationship between them. Research group meetings took place and the main researcher and another experienced researcher identified discrepant findings. A peer categorization and analysis were adopted in order to avoid any bias or trends that would lead to misjudgment or misinterpretation of data. The approach is supported by the literature.

4. Results and Discussion

The role of competition

The role of competition in youth sport may be grouped into eight categories as follows:

(1) Individual growth and development

The majority of coaches associated sporting competition with educational and developmental aspects, which is consistent with the literature (Marques, 2004; Bompa, 2000; Douge, 1999). Topics

such as "life and learning", "learning to win and lose" were emphasized, and coaches seem to be mindful that results and evaluation are not the main purpose of competition. Some coaches reported that children mature faster through sport participation and that the experience of competition may nurture a sense of responsibility and moral values.

Experience in competition seems to prepare athletes to face and overcome difficult circumstances and competitive situations outside of the arena of sport. This experience was also associated with increased self-esteem, self-confidence, discipline, perseverance, and concentration (Marques, 2004; Hedstrom & Gould, 2004; Bompa, 2000): "*…behaviour improve through achievements in sport*" (C[1]24). "*…it prepares children for life as it is an eternal competition*" (C15). "*…it nurtures perseverance and athletes won't quit easily on important things in life*" (C2). "*…winning and loosing are part of the human growth, it is essential*" (C10B).

However, as Passer and Wilson (2002) pointed out, inappropriate experience in competition may decrease perceived physical competence and self-esteem, and generate anxiety and negative perception of others. One coach used a two-sided coin analogy: "*…competition experiences can be positive or negative, depending on the outcomes achieved …*" (C3).

In general, coaches emphasized psychological outcomes, even though none has cited them as the main purpose of the competitive experience. Coaches often emphasize psychological aspects in training as preparation for competition because they think it impacts significantly on performance and results. Even though competition is emotionally and psychologically demanding, performance and success in sport is the interplay of many aspects.

(2) Objectives of training

Some of the coaches encouraged their athletes to view the value of training as reaching far beyond competition outcomes. Alternatively, some coaches stressed the integral relation between training and competition, and for some it is the main objective: "*… if you don't compete, what is the meaning of training everyday?*" (C11). "*... you won't keep anyone in the gym if they don't compete!*" (C2). "*...the main objective of training is the competition ...*" (C3, C15, C22, C29B). Depending on the level of readiness, pressure for results may have close links to increased stress level, burnout and dropout. Competition is one objective of sport, and when athletes have this broad view of sport, they will realize it, winning and results will not be their main reason to be highly committed (Lopes & Nunomura, 2007; Hedstrom & Gould, 2004).

(3) Self-assessment and planning of training

For some coaches competition is a moment when gymnasts can show the results of their efforts in training. Others think competition as a moment for gymnasts to face others, to compare, to recognize their own potential, and to self-evaluate. Competition thus serves as a kind of mirror (De Rose Jr., 2002a): "*...to have experience and to see who is winning*" (C26). "*...it will guide your planning*" (C17). "*...it shows them why I've been demanding in the gym ...*" (C22B). The desirability of associating competitive experiences with self-assessment has been argued by some authors (Zakharov & Gomes, 2003; Bompa, 2000; Weineck, 1999), which was also reported by some coaches: "*...it is a stimulus for self-assessment, to realize what they have achieved …*" (C3). "*...it is a moment to overcome oneself*" (C12). "*…I try to not have children comparing with others*" (C2).

(4) Motivational factor

For most coaches competition is a key motivational factor to keep gymnasts committed to sport. For example: "*...it is an incentive for training and learning even more*" (C11, C18, C22 A, C28, C29 A). "*...you will not have athletes coming to the gym if they don't compete*" (C2). "*...they train even better when they know they will compete*" (C24). The literature is not unequivocal on whether lack of success in competition leads to burnout. In addition, if coaches had open and frank communication with athletes and were realistic about what might be achievable given their resources, the extent of athlete burnout would be reduced.

There is a down-side to coaches only viewing competition as a positive motivational factor. Competition can also be disappointing and frustrating when results are below expectation or when other things 'do not go according to plan'. The challenge for all those whose presence might impact on athletes is to manage expectations and pressures (Hedstrom & Gould, 2004).

One coach clearly associated motivation with future and financial improvement as the main role of competition: "*…the possibility of social upgrade is a*

[1] "C" refers to Coach and number to Institution. When coaches belong to the same institution they were ordered as C1A, C1B, C1C and so on.

motivational factor and outcomes are essential".

Coaches should be mindful of using extrinsic rewards as athletes may require higher and higher material rewards as they progress. In this scenario, the fun of participation may diminish.

Sports like AG, where a subjective assessment of performance is the norm and errors do occur, put an additional pressure on young athletes. This is another facet of gymnast preparation that coaches need to address in order to avoid the potential de-motivation stemming from unfairness in sport.

(5) Understanding athletes

Coaches reported that in competition they can learn more about their athletes and their reaction when faced with difficult moments as well as emotional and psychological demands: "*…in the competition they show their true colours*" (C3).

The lens of competition provides the observant and reflective coach with rich opportunities to learn more about their athletes and provides important clues about their development through counseling, planning and day-to-day coaching. Ideally more coaches would adopt this observation, reflection and action approach in developing their charges. While it is desirable for a psychologist to work with emerging elite athletes, the coaches reported that this was generally affordable for their institutions. This situation intensifies the need for coaches to be knowledgeable about the growth and development needs of their young athletes and to actively translate this knowledge into practice. A common case in point is the late maturing athlete who may be lost to the sport if not nurtured through the developing years by an understanding coach. A late maturing athlete may lack physical attributes conducive to optimal performance. This may put them at a disadvantage compared with their peers. The coach's challenge is to keep the late developing athlete's spirits up and help them understand that their relative performance will improve with maturity.

(6) Socialization

We could only find two statements associating the competitive experience with "socialization", such as the nurturing of respect for others, never cheering against or insulting opponents, and making friends. "*…human beings are competitive in nature, and I don't see it is negative, in AG everybody is friendly and it is healthy in this aspect*" (C8). "*…the experience can promote a sound relationship among them, nurturing positive thinking of each other and not seeing the opponent as an enemy*" (C5). We would expect more emphasis on the social aspect of competition as it has been highlighted in the literature (Hedstrom & Gould, 2004; Weinberg & Gould, 2001; Bompa, 2000; Douge, 1999). Even though coaches did not strongly articulate the importance of competition as a vehicle for socialization, they did however acknowledge that gymnasts enjoy meeting and communicating with others in competition and trips. Athletes in training have fewer opportunities to socialize with new people and competition can be a unique moment to develop social skills and qualities, including the benefits of being with others. Coaches of male gymnasts did not mention anything regarding social issues. A fruitful area of future research would be to compare individual sports such as AG with team sports such as football to see if the 'social nature' of competition is of great significance.

(7) Improving economic status

Some coaches reported that some gymnasts have expectations towards sports as a means to elevate their financial and social status. Financial rewards should not be a key motivational factor, but in poor countries it is understandable that some athletes may dream of the status upgrade. Even so, this objective should not be seen as essential to attracting and keeping athletes committed to sport. The association of sports with financial status was more frequent among the coaches of male gymnasts. The fact that the age of a significant number of the male gymnasts, coincides with the age at which many young men start work in Brazil may be a factor.

To advance in competitive sport, significant resources, including athlete support is essential. However, coaches have to find alternatives to retain gymnasts and should use this strategy only in special circumstances. If extrinsic rewards become the prime motivation, they may spoil the pleasure of participation and detract from sport's ability to shape positive values. The following statement may be questionable as the attitude strengthen the association of sport with extrinsic reward: "*…I think most of them wouldn't stay that long if they had not been paid*" "*…support depends on the results*" (C29C).

(8) Having a realistic view of one's own potential for sport

Effective coaches work with athletes to set realistic goals that enable the athlete to deal with competition results that might fall short of those expected from hard training. Some coaches associated competition with gymnasts using it is a way to assess the impact of their

training: "*…competition helps in setting up your goals, to realize their potential*" (C11). "*…they know what to pursue…*" (C22). "*…it is important to participate in competition to realize their potential and difficulties*" (C14). "*…it is a moment for evaluation…*" (C29C). Being realistic about what is achievable may prevent frustrations. If athletes want to 'shoot for the stars', coaches can help to develop a realistic game-plan (Lopes & Nunomura, 2007). The challenge for the coach is to build on the 'obvious' rewards of competition: medals, status, etc.; and use the competitive experience to nurture attributes that may have life-long value.

5. Closing Thoughts

Sport by its nature is competitive. To argue differently would be mistaken. For children engaged in competitive sport, however, questions abound. When should competition start, how should winning be rewarded, how should losing be managed, what kind of competition is appropriate? Almost half a century of literature has debated these and other questions.

The current study explored the views of Brazilian coaches of male and female AG developing gymnasts. The underlying assumption for the analysis of the data is that competitive sport is both appropriate and beneficial as an activity for children and youth. The test of this statement has two broad measures: the extent to which the competitive experience is developmentally appropriate and the quality of the emotional climate created by the constellation of adults in a position to influence the children and youth concerned. These two broad criteria that we use to argue in favor of competitive children' and youth sport is underpinned by four principles:

Talk before and after winning and losing. The significance of winning needs to be kept and perspective, just as it is important to understand that the lessons learnt in defeat have life-long bearing. Everyone within the athlete's circle of significant others has a role to play in using the lessons of winning and losing to the benefit of the athlete. 'Talk' includes coaching and competition feedback, advice from adults and other words from peers and adults. Words and actions contribute to creating an 'emotional climate'.

Manage competitive sport to suit the child. The art of effective management is to match competition requirements to levels of skills and developmental readiness. This includes providing equal opportunity for all, being respectful of difference and rewarding personal progress in an appropriate manner.

Use the rules of competition for positive outcomes. Competition in sport occurs within a framework of rules. The rules or laws of the game serve many functions, ranging from the provision of safe environments to rendering the sporting spectacle appealing to the spectator. Adults act as role models and therefore have significant responsibilities in creating an appropriate climate with regard to officiating decisions. Role models have the potential in turn to influence the behavior of athletes. Reactions to officiating decisions carry significant messages for better or worse.

Model appropriate adult behavior. How coaches interact with athletes as models is vital. 'Teachable moments' are plentiful and capitalizing on them is crucial. There is much more to coaching than coaching! Athletes are influenced by what their coaches say and do. Sport provides many opportunities to highlight lessons that are important to the development of balanced citizens. When a coach demonstrate disrespect for athletes and others, fails to deal appropriately with difficult situations or manages a group of athletes poorly, opportunities for good role modeling for athletes bring negative messages. Athletes spend significant amounts of time in the company of coaches. Therefore, coaches are "significant others" whose influence may carry over to the time when athletes themselves become coaches. Bad coaching practices are therefore potentially inter-generational.

Training and competition is where the majority of 'communication' between athlete and coach occurs. The coaching agenda should do much to capitalize on these opportunities and seek to apply the above principles. We do however stress that it is the entire circle of significant others who provide various inputs into a child's sporting experience and therefore shape the development of the child. This has implications for how we use the vehicle of sport for positive outcomes. There is a strong case to be made for a collective and shared approach to behavioral change. The coach alone cannot do it, if others within the athlete's circle are working in an opposite direction.

For the 'competitive sport is good' claim to withstand scrutiny, the broad criteria of a child-centered experience occurring in a positive and supportive emotional climate must be upheld. The four principles provide a checklist for all adults within the child's circle to gauge their contribution to the child's overall

development. It means all the stakeholders should collaboratively develop a shared understanding of the actions required to ensure that outcomes contribute to athlete welfare. The magnitude of the challenge is not to be underestimated, and coaches are left to find the "right balance" by concocting a recipe that mixes pre-elite training methods, pastoral care and expectations to win.

We have re-visited some long standing issues in youth sport, but we hope to have underlined the need for coaches to be reflective, to improve and deepen their knowledge and understanding of athletes, and to strive to create a collaborative environment that acts in the interest of the athletes.

From the study the authors conclude that some coaches see de-motivation and high dropout rates as problems that stem from competition, and to prevent these undesirable outcomes coaches should not overemphasize results and be sure to select those events that fit the children's ability.

In general, coaches didn't feel that the volume of competition was a problem as this can be customized so the gymnast's competition schedule matches the gymnast's skill levels and meets the objectives of the gymnasts.

Gymnastics competitions are governed by technical rules that set out requirements for the construction of routines. It is often the case that gymnasts are not able to meet all of these requirements. Not meeting the requirement results in lower scores. This presents a coaching challenge as coaches need to provide motivation and guidance while emphasizing the positive aspects of performance such as good execution. Meeting all the technical requirements becomes a longer-term objective. The effective coach is able to manage expectations relating to these short and long-term objectives. The study highlighted the general lack of interest coaches have in helping their gymnasts understand the effect of late maturation.

In this regard, adults and particularly coaches can play an important role in minimizing such problems and providing youth sport participants a positive experience.

For sport to be beneficial, all those who are involved in youth competition need to operate within agreed guidelines and abide by the rules, so that athletes realize the potential for good that sport has to offer.

This study has examined the views of Brazilian coaches regarding competition and has proposed a set of principles the authors believe have the potential to provide a framework for athlete preparation and competition that is youth-centered. The framework has the objective of optimizing the youth sport experience and also provides a basis for future research.

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